Fact Sheet

NPDES Permit Number: AK-005319-8
Date: March 2000
EPA Contact: Cindi Godsey
Alaska Operations Office/Anchorage
(907) 271-6561 or (800) 781-0983 (in Alaska only)
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The U.S. Environmental Protection Agency (EPA) Plans To Issue A Wastewater Discharge Permit To:

Rudd VanDyne
PO Box 110
Eagle, Alaska 99738

This will also serve as

NOTICE OF STATE CERTIFICATION.

EPA Proposes NPDES Permit Issuance.

EPA proposes to issue a *National Pollutant Discharge Elimination System* (NPDES) The applicant has applied for an NPDES permit for a four inch and an 8 inch suction dredge operation on Birch Creek in Alaska. The proposed permit sets conditions on the discharge - or release - of pollutants from the operation into waters of the United States.

This Fact Sheet includes:

- a description of the proposed discharge,
- a description of proposed effluent limitations, monitoring requirements, and other conditions and
- a map of the area of the discharge.

The State of Alaska certification.

EPA has requested that the Alaska Department of Environmental Conservation (ADEC) certify the NPDES permit for this operation under section 401 of the

Clean Water Act.

EPA invites comments on the proposed permit.

EPA will consider all substantive comments before issuing a final permit. Those wishing to comment on the proposed permit may do so in writing by the end of the public comment period (see Public Notice) to USEPA-Region 10, 1200 Sixth Avenue, OW-130, Seattle, Washington 98101. Comments may also be e-mailed to godsey.cind@epa.gov

Persons wishing to comment on State Certification should submit written comments by the public notice expiration date to the Alaska Department of Environmental Conservation, 610 University Avenue, Fairbanks, Alaska 99709.

The permit will become effective 30 days after issuance unless no substantive comments are received in which case, the permit can be effective upon issuance.

Documents are available for review.

The proposed NPDES permit and fact sheet can be reviewed at EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday. This material is also available for inspection and copying at the following places in Alaska:

USEPA Alaska Operations Office
Federal Building, Room 537
222 West 7th Avenue
Anchorage, Alaska 99513-7588
Telephone: (800) 781-0983 (Within Alaska)

USEPA Alaska Operations Office
410 Willoughby Avenue, Suite 100
Juneau, Alaska 99801
Telephone: (907) 586-7619

ADEC Watershed Development Program
Air and Water Quality Division
610 University Avenue
Fairbanks, AK 99709
Telephone: (907) 451-2101

TECHNICAL INFORMATION

1. APPLICANT INFORMATION

Rudd VanDyne
PO Box 110
Eagle, Alaska 997328

The applicant has applied for an NPDES permit for a four inch and an 8 inch suction dredge operation. The application and supporting information were received by EPA in November 1999. EPA assigned the application NPDES Permit Number, AK-005319-8

The facility will operate on the lower end of Birch Creek (see Attachment 1). The operator will be using the four inch dredge for initial prospecting for gold deposits. If a site is found that is suitable for mining an 8 inch dredge would be utilized. The dredged areas will be backfilled with tailings as the dredging occurs.

2. RECEIVING WATER

The receiving water is Birch Creek which is classified in 18 AAC 70 as Classes (1)(A), (B), (C), and (D) for use in drinking, culinary, and food processing, agriculture, aquaculture, and industrial water supply; contact and secondary recreation; and growth and propagation of fish, shellfish, other aquatic life and wildlife.

The location designated in the application in Birch Creek borders a part of the corridor designated as wild under the Wild and Scenic Rivers Act.

3. STATUTORY BASIS FOR PERMIT CONDITIONS

a. Technology-based Limitations

Pursuant to Section 402(a)(1) of the Clean Water Act (CWA), development and implementation of Best Management Practices (BMP) Plans may be included as a condition in NPDES permits. Section 402(a)(1) authorizes EPA to include miscellaneous requirements that are deemed necessary to carry out the provision of the Act in permits on a case-by-case basis . BMPs are required to control or abate the discharge of pollutants in accordance with 40 CFR § 122.44(k).

b. Water Quality-based Limitations

Section 301(b)(1) of the Act requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1977. All

discharges to state waters must comply with state and local coastal management plans as well as with state water quality standards, including the state's antidegradation policy. Discharges to state waters must also comply with limitations imposed by the State as part of its certification of NPDES permits under section 401 of the Act.

The NPDES regulations at 40 CFR 122.44(d)(1) require that permits include water quality-based limits which "Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

c. Section 308 of the Clean Water Act

Under Section 308 of the Act and 40 CFR § 122.44(i), the Director must require a discharger to conduct monitoring to determine compliance with effluent limitations and to assist in the development of effluent limitations. EPA has included monitoring requirements in this permit, as listed below.

4. SPECIFIC PERMIT CONDITIONS

The determination of appropriate conditions for the discharge was accomplished through consideration of technology-based effluent limitations and inclusion of permit terms necessary to ensure compliance with state water quality standards. Discussions of the specific effluent limitations and monitoring requirements appear below.

a. Limitations

Suction dredges' unique method of intake and displacement present unusual permitting issues. They operate on the surface of the water, only remove material from the bottom of the waterbody, and process and quickly return mined material to the bottom. For these reasons EPA has determined that numeric effluent limitations are not practical. Instead, the BMPs in Permit Part II. have been developed. These BMPs, which are supplemented by required turbidity monitoring designed to ensure that the BMPs are being implemented properly, are, in this circumstance, sufficient to implement the requirements of the Act. That is, these practices would ensure that the beneficial uses designated by the State are adequately protected and justify the absence of other technology and water quality-based effluent limitations.

b. Monitoring and Reporting Requirements

The permit requires daily visual inspection of the area within 500 feet downstream of the suction dredge during operation. If turbidity is observed beyond 500 feet, the permittee would be required to modify the

operations to meet the permit limitation. If the operation could not be modified to meet the limit, the operation would not be authorized.

This requirement is based on research published in the scientific literature (Griffith and Andrews 1981, Hassler et al. 1986, Harvey 1986, Huber and Blanchet 1992, Thomas 1985) and on monitoring done by Alaska Department of Environmental Conservation (ADEC) (Ron McAllister, ADEC, personal communication). In most cases, water quality recovers rapidly. Information provided in EPA's suction dredge study and the United States Geological Survey (USGS) study on an eight and a ten inch suction dredge support the conclusion that the potential effects on water quality are short-term. The daily inspection during operation, combined with the BMPs in Permit Part II. should assure that the water quality standards are met.

The reporting requirement is based on 40 CFR § 122.48 which is specified in the permit as an annual submission of the Discharge Monitoring Report (DMR). 40 CFR § 122.44(i)(2) allows flexibility in determining the frequency of reporting.

5. OTHER LEGAL REQUIREMENTS

a. Oil Spill Requirements

Section 311 of the Act prohibits the discharge of oil and hazardous materials in harmful quantities. Routine discharges specifically controlled by a permit are excluded from the provisions of Section 311. However, this permit does not preclude the institution of legal action or relieve the permittee from any responsibilities, or penalties for other, unauthorized discharges of oil and hazardous materials which are covered by Section 311 of the Act.

b. State Water Quality Standards and State Certification

Whereas state waters are involved in this draft permit, the provisions of Section 401 of the Act will apply. Furthermore, in accordance with 40 CFR § 124.01(c)(1), public notice of the draft permit has been provided to the State of Alaska.

c. Endangered Species Act (ESA)

Letters were sent to the U.S. Fish and Wildlife Service (USFW) and to the National Marine Fisheries Service (NMFS) on February 9, 2000, requesting information as to the extent of threatened and endangered species in the project area. In a response letter dated February 17, 2000, NMFS that consultation on this permit is not necessary because there are

no endangered species under their jurisdiction present in the area.

d. Essential Fish Habitat (EFH)

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act set forth a number of new mandates for NMFS, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish habitat. The action agency needs to make a determination Federal actions that may adversely impact EFH.

In streams where suction dredging occurs, the most critical life stage for salmon is the egg stage. The GP prohibits suction dredging within 500 feet of locations where fish are spawning or where fish eggs or alevins are known to exist. The Alaska Department of Fish and Game issues permits for mining in anadromous streams that limit or prohibit mining while the eggs are in the gravel. A discharge is unlikely to occur during the critical phase and if it did, the studies showed that the impacts of an operation are minimal after 500 feet so the 500 foot buffer should be sufficient protection. EPA has notified NMFS that it has determined that no adverse impact to EFH in freshwaters would result from the issuance of this permit.

In their February 17, 2000, letter, NMFS also indicated that there are no species subject to review under the Magnuson-Stevens Fishery Conservation and Management Act's EFH occurring at these sites.

6. REFERENCES

Impact of suction dredging on water quality, benthic habitat, and biota in the Fortymile River, Resurrection Creek, and Chatanika River, Alaska. Prepared for EPA by Aaron M. Prussian, Todd V. Royer, and G. Wayne Minshall, Idaho State University. June 1999.

Regional Baseline Geochemisty and Environmental Effects of Gold Placer Mining Operations on the Fortymile River, Eastern Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-328. 1999.

Regional Geochemical Results from the Analyses of Rock, Water, Soil, Stream Sediment, and Vegetation Samples--Fortymile River Watershed, East-Central Alaska. Department of Interior, U.S. Geological Survey. Open-File Report 99-33. 1999.

The following references were used in an unpublished research effort entitled "A Review of the Regulations and Literature Regarding the Environmental Impacts of Suction Gold Dredges," April 1993 by Phillip A. North of the Environmental

Protection Agency, Region 10, Alaska Operations Office.

Griffith, J.S. and D.A. Andrews. 1981. Effects of a small suction dredge on fishes and aquatic invertebrates in Idaho streams. North American Journal of Fisheries Management 1:21-28.

Hassler, T.J., W.L. Somer and G.R. Stern. 1986. Impacts of suction dredge mining on anadromous fish, invertebrates and habitat in Canyon Creek, California. Calif. Coop. Fish. Res. Unit., Humboldt State University, Arcata, California, Coop. Agreement No.14-16-009-1547, Work Order No. 2. 135 pages.

Harvey, B.C. 1986. Effects of suction gold dredging on fish and invertebrates in two California streams. North American Journal of Fisheries Management 6:401-409.

Huber, C. and D. Blanchet. 1992. Water quality cumulative effects of placer mining on the Chugach National Forest, Kenai Peninsula, 1988-1990. U.S. Forest Service, Chugach National Forest, Alaska Region. 74 pages.

Thomas, V.G. 1985. Experimentally determined impacts of a small suction gold dredge on a Montana stream. North American Journal of Fisheries Management 5:480-488.

APPENDIX A - Area Map